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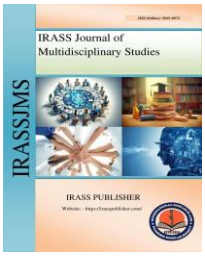

CAPITAL ADEQUACY AND FINANCIAL GROWTH OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract: This study examines the relationship between capital adequacy and Nigeria's financial growth, utilizing panel data from 12 listed deposit money banks spanning the period from 2014 to 2023. The study adopts an ex-post facto research design and utilizes secondary data sourced from the Nigerian Exchange Group and the Central Bank of Nigeria (CBN) Statistical Bulletin. Financial growth is proxied by earnings per share (EPS), while the explanatory variables include Capital Adequacy Ratio (CAR), Paid-Up Share Capital (PUSC), and Share Premium (SP). Using fixed effect model regression and relevant diagnostic tests, the findings indicate that CAR has a negative but statistically insignificant effect on EPS, while both PUSC and SP exert statistically significant negative effects on EPS. The results suggest that increases in equity capital components may not necessarily enhance financial growth in listed DMBs. The study concludes that capital adequacy elements should be more efficiently managed to optimize shareholder value. It recommends that banks review their capital structure strategies to ensure that capital accumulation directly supports profitability and shareholder returns.

Keywords: Capital Adequacy Ratio, Paid-Up Share Capital, Share Premium and Earnings per share.

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Introduction

The banking sector plays a critical role in the financial system, primarily by managing deposits and facilitating credit access. One of the core functions of monetary policy, both in Nigeria and globally, is to ensure the financial stability of banks and regulate the availability of loans and deposits (Gbarawae et al., 2024; Umeaduma, 2024; Akpanke et al., 2022). This is especially crucial in Nigeria, where Small and Medium Enterprises (SMEs) contribute significantly to the economy, employing over 84% of the workforce and accounting for 48.5% of the country's GDP (Usman et al., 2024). These SMEs are largely dependent on bank financing, highlighting the importance of a healthy banking sector.

However, Nigerian banks face challenges such as poor credit risk management, inadequate credit risk structures, and an underperforming credit rating system, all of which hinder their ability to maximize shareholder value (Ohonba & Aigienohuwa, 2023). Furthermore, adverse financial conditions like increased reserve requirements or rising interest rates can weaken banks' financial stability, restricting their ability to lend (Chalabi-Jabado & Ziane, 2024). In severe cases, such situations may lead to systemic banking crises, causing even solvent banks to collapse and limiting access to credit (Wullweber, 2024).

To mitigate such risks, banks must maintain a minimum level of capital, as stipulated by international guidelines like Basel III, relative to their risk-weighted assets. This ensures they can absorb shocks from operational, credit, and market risks (Bank for International Settlements [BIS], 2022). According to Odinaka et al. (2024), maintaining capital adequacy allows banks to support long-term investments and manage liquidity during economic downturns, thus fostering sustainable financial growth (Krishnamurthy & Li, 2025). In Nigeria, the Central Bank enforces a minimum Capital Adequacy Ratio (CAR) of 15% for internationally licensed banks and 10% for locally licensed ones to ensure their resilience and continued lending capabilities (Roselyn et al 2021) Badaru, & Moses,2025, Chamba, et al 2024, Ibrahim, et al 2024, Ejura, et al 2023, Musa, et al 2015 Jibrin, et al 201, Musa, et al 2022, Jibrin,et al 2015, Musa, et al 2013 Musa, et al 2013, Ifurueze, et al 2012, Musa, et al 2022 Hussain, et al 2024, Musa, & Moses, 2022, Tsegba, et al 2021 & Musa, (2022, Jibrin, et al 2016, Jibrin, et al 2016)).

Paid-Up Share Capital (PUSC) and Share Premium (SP) are also important financial metrics for listed Deposit Money Banks (DMBs). PUSC represents the actual capital shareholders invest in exchange for shares, influencing the bank's financial strength and lending capacity (Onyebuchi, 2024). When properly utilized, higher PUSC can boost a bank's ability to generate profits and increase Earnings Per Share (EPS). However, inefficient use of capital may dilute EPS despite higher capital (John et al., 2022). Similarly, Share Premium refers to the extra amount received over the nominal value of shares during issuance, which can enhance a bank's financial flexibility when effectively managed (Fonchamnyo

et al., 2023). Proper management of SP can lead to improved profitability, benefiting EPS and shareholder value (Samuel et al., 2022).

This study aims to explore the impact of capital adequacy, specifically the Capital Adequacy Ratio (CAR), Paid-Up Share Capital (PUSC), and Share Premium (SP), on the Earnings Per Share (EPS) of listed DMBs in Nigeria over a ten-year period (2014-2023). When optimally structured, the capital components of a bank should provide a foundation for long-term financial growth, enabling banks to absorb risks, expand credit, and invest in productive assets, all of which positively influence EPS. However, many Nigerian banks, despite meeting regulatory capital requirements, continue to show signs of undercapitalization and vulnerability (CBN, 2024; Cardoso, 2023; Adegbite & Emeni, 2022). Moreover, funds raised through share premiums are often misallocated or left idle, failing to contribute to shareholder value (Le Manh, 2025; Onyebuchi, 2024; Onafowokan & Oduwaiye, 2021). This inefficiency raises concerns about the role of capital structure in achieving financial growth, especially in terms of EPS. (Ibrahim, & Musa, 2022, Ibrahim, & Musa, 2022,Ibrahim, & Musa, 2022, Ibrahim, et al., 2022, Moses, et al 2022, Moses, et al., 2018, Ejura, et al. 2023 & Oginni, et al.2014 Ejura, et al, 2023, Moses, et al 2022, Haruna, et al 2021, Moses, et al 2018, Abdul, et al 2025 John, et al 2024, Ibrahim, et al 2022 Jibrin, et al 2022)

The study aims to fill two key research gaps. First, while previous research (e.g., Awwad, 2021; Pervez et al., 2023) has explored the relationship between capital adequacy and profitability using metrics like Return on Assets (ROA) or Return on Equity (ROE), few have examined how the Capital Adequacy Ratio (CAR) affects EPS, a more direct measure of shareholder value. Second, although studies on equity financing (e.g., Usman et al., 2021; John et al., 2022) have focused on Paid-Up Share Capital (PUSC) or Share Premium (SP) separately, limited research has assessed their combined influence on EPS. Therefore, this study aims to evaluate how CAR, PUSC, and SP collectively affect the financial growth of listed DMBs in Nigeria.To address these issues, the study will answer the following questions:

i. How does the Capital Adequacy Ratio (CAR) affect the earnings per share (EPS) of listed deposit money banks in Nigeria?

ii. What is the effect of Paid-Up Share Capital (PUSC) on the earnings per share (EPS) of listed deposit money banks in Nigeria?

iii. How does Share Premium (SP) affect the earnings per share (EPS) of listed deposit money banks in Nigeria?

The main objective is to examine the relationship between capital adequacy and financial growth in Nigerian banks, with a focus on:

i. Assessing the impact of the Capital Adequacy Ratio (CAR) on earnings per share (EPS).

ii. Evaluating the effect of Paid-Up Share Capital (PUSC) on earnings per share (EPS).

iii. Investigating how Share Premium (SP) influences earnings per share (EPS) in listed deposit money banks

Conceptual Review

Capital Adequacy Ratio (CAR)

Capital adequacy, as outlined by the Basel Accords, mandates that banks maintain a certain percentage of their assets as capital to manage risks, including operational, credit, and market risks (BIS, 2022). In Nigeria, the Central Bank (CBN) requires a minimum CAR of 15% for internationally licensed banks and 10% for those with local licenses (CBN, 2022). A well-maintained CAR ensures that banks can withstand financial stress and maintain stability in the financial system (Igbinosa & Naimo, 2020). However, in developing economies like Nigeria, inadequate capital structures often lead to liquidity crises, solvency issues, and bank failures (Owolabi, 2017). Research shows mixed results about CAR's impact on financial performance. While some studies (Safitri, 2022; Sunaryo, 2020) report a positive relationship between CAR and financial performance, others (e.g., Kusumastuti, 2019; Irawan, 2019) suggest a negative effect.

Paid-Up Share Capital (PUSC)

Paid-up share capital represents the actual funds that shareholders contribute to a company in exchange for shares (Merton & Bodie, 2023). This capital remains fixed unless the company restructures its equity (e.g., through rights or bonus issues) (Gupta, 2021). PUSC plays a key role in determining a company's financial strength and stability, providing the foundation for operational and investment activities (Singh, 2022). A higher PUSC enhances shareholder equity and allows the company to raise external funding more easily. However, issuing additional shares can dilute existing ownership and control (Mahmood, 2019). Additionally, a robust PUSC base allows for dividend distributions, enhancing shareholder satisfaction if the company is profitable (Adams, 2020).

Share Premium (SP)

Share premium refers to the amount paid by investors above the nominal value of shares during their issuance. This excess is recorded in a separate equity account and cannot be distributed as dividends (Brigham & Ehrhardt, 2023). The share premium strengthens a company’s capital base without increasing liabilities and can be used for purposes such as issuing bonus shares, covering preliminary expenses, or buying back shares (Gupta, 2021). SP enhances a company’s creditworthiness by increasing equity, thus improving access to credit and reducing borrowing costs (Singh, 2022). Share premium often arises during IPOs, rights issues, or private placements, reflecting investor confidence in the company’s growth prospects (Adams, 2020). Legal restrictions on its usage protect creditors, ensuring it isn’t freely distributed like retained earnings (Owolabi & Ajibade, 2020).

Earnings Per Share (EPS)

Earnings per share (EPS) is a key indicator of a company's profitability, showing how much of the net income is attributed to each outstanding share. It is a critical metric for assessing financial performance and shareholder value. EPS is often used to gauge investor confidence, with higher EPS generally attracting more investment (Shikumo, 2021; Almeida, 2019). According to Arsal (2021), EPS is linked to stock price movements, highlighting its importance in market demand for shares. Gharaibeh et al. (2022) emphasize that EPS not only reflects profitability but also impacts

investor interest, making it a crucial metric for understanding financial growth.

Empirical Studies

Awwad (2021) conducted an empirical study in Palestine to explore the relationship between capital adequacy and profitability indicators of six local banks listed on the Palestine Stock Exchange from 2010 to 2019. Using simple linear regression analysis, the independent variable was the capital adequacy ratio (CAR), while the dependent variable was profitability, proxied by return on equity (ROE). The results revealed a negative relationship between CAR and ROE, suggesting that although Palestinian banks maintain high capital buffers exceeding Basel III minimums (10.5%), this may reduce profitability. The study implies that excessive capital may constrain income-generating activities, thereby potentially affecting earnings per share (EPS) negatively. It suggests that optimal capital levels not merely higher ones—are crucial for balancing stability and financial growth.

Shikumo (2021) assessed the effect of share capital on the financial growth of 45 non-financial firms listed at the Nairobi Securities Exchange (NSE) in Kenya from 2008 to 2017. The study adopted an explanatory design, using panel data analysis. Share capital served as the independent variable, while financial growth was the dependent variable, proxied by earnings per share (EPS) and market capitalization. The findings showed that share capital positively and significantly influenced financial growth, explaining 32.73% and 11.62% of the variation in EPS and market capitalization, respectively. These results suggest that equity financing, particularly through share capital, enhances firm growth and profitability. The study recommends that firms pursue equity-based financing to fund major expansions and improve EPS, indicating a clear positive linkage between paid-up capital and financial performance.

Usman et al. (2021) examined the effect of equity capital financing on the financial performance of 14 listed Nigerian DMBs from 2009 to 2018. Share capital, retained earnings, and other reserves were independent variables, while ROA was used as the dependent variable. Robust OLS regression was applied. The study found that share capital had a positive but insignificant effect on ROA, while retained earnings and other reserves had positive and significant effects. These results imply that while PUSC may contribute to financial growth, its impact is limited unless combined with other internal equity sources. The findings are relevant for understanding the marginal role of PUSC in driving EPS growth in listed banks.

Bornfas and Githira (2022) explored the relationship between financial structure, specifically leverage and share capital, and financial intermediation efficiency among 174 deposit-taking SACCOs in Kenya from 2017 to 2021. Using descriptive design and panel data analyzed via STATA, the study considered share capital and leverage as independent variables, and financial intermediation efficiency as the dependent variable. While leverage had a positive and significant effect, share capital showed a positive but statistically insignificant effect on financial intermediation efficiency. This suggests that although share capital contributes to efficiency, its impact may be limited compared to other financial structure elements. The findings highlight that maintaining adequate share capital helps SACCOs support credit expansion and financial operations, although it may not directly or strongly affect performance indicators like EPS unless complemented by other capital components.

Samuel et al (2022) examined how financial structure components, including share capital, influence the financial growth of 21 financial firms listed at the Nairobi Securities Exchange over the 2010–2017 period. Using a descriptive research design and guided by theories like Modigliani-Miller and Trade-off Theory, the study analyzed the effect of short-term debt, long-term debt, retained earnings, and share capital on financial growth. The dependent variable, financial growth, was proxied by profitability indicators. The findings revealed that share capital had a positive and significant effect on financial growth, implying that increases in paid-up capital enhance firm performance. Additionally, firm size significantly moderated the relationship between financial structure and financial growth. The study supports the assertion that equity-based financing contributes positively to earnings performance, validating the relevance of share capital to EPS growth in listed financial institutions.

John et al. (2022) assessed the role of equity financing in the financial performance of Nigerian Deposit Money Banks using an ex-post facto design. The study used share premium as a key independent variable and return on assets (ROA) as the dependent variable, drawing secondary data from CBN and NDIC sources. Although the specific period was not clearly stated, the analysis revealed that share premium shocks accounted for approximately 41% of the variation in ROA, indicating a strong and positive relationship between share premium and bank performance. The study recommended greater reliance on equity over debt financing. This underscores the relevance of SP as a contributor to financial growth, which supports the notion that increased SP may improve EPS through enhanced financial flexibility and retained earnings capacity in DMBs.

Pervez et al. (2023) conducted a panel regression study on 65 Indian banks (private, public, and foreign) between 2005 and 2018 to examine the effect of capital adequacy and risk on performance. Capital adequacy ratio (CAR), net non-performing assets, and bank-specific factors served as independent variables, while profitability measures like ROA/ROE were dependent. The study found a negative relationship between CAR and performance, indicating that excessive capital buffers may constrain profitability. Additionally, non-performing assets negatively affected lending capacity and earnings. These findings challenge the assumption that high CAR always benefits bank performance, implying that optimal capital allocation, not just high CAR, is crucial for sustaining EPS and bank growth.

Ezu et al. (2023) evaluated the role of capital adequacy in the efficient performance of Nigerian deposit money banks using data from listed banks with national and international authorization. The study, covering an unspecified recent period, used OLS regression in E-Views, with total capital to risk-weighted assets, debt-to-equity ratio, and capitalization to credit as independent variables, and ROA as the performance proxy. The findings showed a significant, inverse linear relationship between capital adequacy and bank efficiency. This implies that while capital adequacy is important, excessively high levels might hinder bank efficiency and earnings. The study concluded that regulatory updates are needed to align capital thresholds with current economic realities, indicating that CAR may negatively impact EPS when inefficiently managed.

Fonchamnyo et al. (2023) conducted a study on the effect of capital structure on the financial sustainability of 15 microfinance institutions (MFIs) in Bamenda, Cameroon, using

data from 2014 to 2020. Employing Generalised Least Squares and quantile-on-quantile regression, the study examined how debt, equity (including share capital), grants, and retained earnings affected sustainability, measured by Operational Self-Sufficiency. While debt and grants showed a statistically significant adverse effect, retained earnings had a positive and significant effect. Share capital (as a proxy for equity) had a positive but statistically insignificant effect on sustainability. Although the study focused on sustainability rather than EPS, the findings suggest that equity capital, including share capital, can support financial performance when efficiently utilized, albeit with limited direct impact unless backed by retained earnings or operational strategies that ensure profitability.

Odinaka et al (2024) investigated how financial risk affects liquidity performance of Nigerian Deposit Money Banks (DMBs), considering capital adequacy as a mediator. The study, conducted in Nigeria, used capital adequacy as a mediating variable and operational, market, and credit risks as independent variables, with liquidity performance as the dependent variable. Ten listed DMBs were purposively sampled from 2010 to 2022. Using structural equation modelling, the findings revealed that capital adequacy does not significantly mediate the relationship between financial risks and liquidity performance. The study emphasized the need for DMBs and regulators to implement more robust capital adequacy frameworks to manage liquidity risks better and improve financial disclosures. Although the findings do not show a direct link with EPS, the insight into capital adequacy provides valuable context for understanding its broader financial implications.

Theoretical Framework

The Financial Intermediation Theory offers a critical framework for understanding how financial institutions contribute to economic development by facilitating the efficient allocation of resources. Initially proposed by John G. Gurley and Edward S. Shaw in their 1960 work, Money in a Theory of Finance, the theory challenged the earlier perception of financial systems as passive entities that merely transferred savings from surplus units to deficit units. Gurley and Shaw argued that financial intermediaries, such as banks, insurance companies, and mutual funds, actively shape the flow of funds within the economy. They do so by assessing risks, screening borrowers, mitigating information asymmetries, and reducing transaction costs, thus improving the overall efficiency of markets and enhancing credit allocation.

One of the key functions of financial intermediaries, as outlined in the theory, is risk transformation. By pooling deposits and lending to a diverse group of borrowers, banks can spread risk across many individuals, reducing the exposure of individual savers to potential financial losses. This process helps stabilize the financial system and fosters public trust. Another vital function is maturity transformation. Financial intermediaries convert short-term savings into long-term loans, aligning the liquidity preferences of savers with the long-term capital needs of borrowers. This not only encourages capital formation but also stimulates investment. Additionally, size transformation is another critical function, where financial institutions aggregate small deposits into large sums of loanable funds, enabling investments that individual savers would not be able to finance independently.

Building on Gurley and Shaw's foundational model, Diamond and Dybvig (1983) expanded the theory by introducing the concept of bank runs, demonstrating that without mechanisms like deposit insurance, solvent banks could face panic withdrawals, which could lead to systemic crises. More recently, Allen and Santomero (1998) highlighted the evolving role of financial intermediaries in managing risks, noting their increased involvement in facilitating risk transfer and innovation within the global financial system. They argue that modern financial intermediaries are no longer just lenders, but central players in the broader processes of financial globalization.

In developing economies like Nigeria, the relevance of the Financial Intermediation Theory is particularly pronounced. Financial institutions play an essential role in addressing the chronic issue of capital scarcity that often hampers growth in these regions. By effectively channeling funds from surplus sectors to underfunded productive sectors, banks contribute to key economic goals such as job creation, income redistribution, and overall economic growth. Research by Nguyen (2021) and Liang et al. (2020) underscores that the ability of banks to diversify their portfolios and manage risks through advanced credit appraisal methods strengthens economic resilience, especially in times of macroeconomic instability.

The theory also emphasizes the importance of regulatory oversight to maintain depositor and investor confidence. Ariffin and Kassim (2021) highlight that sound regulatory frameworks, including capital adequacy requirements and stress testing, are critical for preventing systemic risks and ensuring long-term financial stability. Cuza (2009) adds that modern financial intermediation not only focuses on the operational roles of banks but also considers the impact of monetary policy and regulatory interventions on the efficiency of intermediation. This is particularly pertinent in Nigeria, where the Central Bank's recent mandate for the recapitalization of Deposit Money Banks by 2026 aims to strengthen liquidity and improve banks' capacity to support national development goals

Methodology

The study utilized an ex-post facto research design, suitable for analyzing historical relationships between variables where the researcher cannot control the independent variables. Secondary panel data from the published annual reports of 12 listed Deposit Money Banks (DMBs) in Nigeria, as of December 31, 2023, were used. The dataset spans a period of ten years, from 2015 to 2024.The population for the study consisted of all deposit money banks operating in Nigeria, but the sample was limited to those publicly listed on the Nigerian Exchange Group (NGX) with consistent data available for the entire study period. The research focused on the impact of bank capital adequacy indicators Capital Adequacy Ratio (CAR), Paid-Up Share Capital, and Share Premium on the financial growth of DMBs, measured by Earnings Per Share (EPS). To analyze the panel data, econometric techniques for panel data were applied. The initial analysis involved descriptive statistics to summarize the variable distributions. Diagnostic tests, including the Variance Inflation Factor (VIF) test for multicollinearity and the Breusch-Pagan-Godfrey test for heteroscedasticity, were conducted to ensure the validity of the regression results. The study employed Pooled Ordinary Least Squares (OLS) regression to explore the relationship between capital adequacy and financial growth. Although advanced panel estimation methods like Fixed Effects or Random Effects models were appropriate, Pooled OLS was chosen due to the absence of significant unobserved heterogeneity, as indicated by preliminary tests. All statistical analyses were conducted at a 5% significance level using EViews 13 software

Table 1:
Variable, Measurement and Sources

S/N	Variable Name	Type	Measurement	Proxy	Source
1	Capital Adequacy Ratio	Independent	Total capital divided by total deposit	CAR	Gupta (2021)
2	Paid Up Share Capital	Independent	Paid-Up Share Capital divided by total equity capital	PUSC	Gupta (2021)
3.	Share Premium	Independent	Share Premium divided by total equity capital	SP	Gupta (2021)
3	Earnings per share	Dependent	Net income divided by average outstanding shares.	EPS	Saleh (2023)

Source: Researchers' Tabulation

Model Specification

To examine the relationship between CAR and financial growth, the study adopts an econometric model used by Akinbola (2024) to investigate capital adequacy and financial stability: A study of Nigerian banks' resilience in a volatile economy. The functional form of the model of this study is specified as:

EPSt = (CAR, PUSC, SP) ---------- (1)

$EPS_t = \beta_0 + \beta_1 CAR_t + \beta_2 PUSC_t + \beta_3 SP_t + \varepsilon_t$ ----------(2)

Where:

EPS_t = Earnings per share at time t,

CAR_t = Capital Adequacy Ratio at time t,

$PUSC_t$ = Paid Up Share Capital at time t,

SP_t = Share Premium at time t,

β_0 = Constant term,

β_1, β_3 = Coefficients of independent variables,

ε_t = Error term.

The model is justified as it is grounded in financial theory and incorporates key variables influencing financial growth. Drawing on Akinbola (2024), this study examines the impact of the capital adequacy ratio, paid-up share capital, and share premium on EPS. The model's linear regression framework enables empirical analysis, hypothesis testing, and informed conclusions, making it suitable for investigating the impact of capital adequacy indicators on the financial growth of listed deposit money banks in Nigeria.

Data Presentation and Analysis

This research begins with the presentation of descriptive statistics for the key variables, as shown in Table 2. The descriptive statistics provide insight into the distribution and characteristics of the key variables used in this study.

Table 2:

Descriptive Statistics

	EPS	CAR	PUSC	SP
Mean	2.398	0.180	0.024	0.242
Median	0.990	0.180	0.020	0.210
Maximum	21.550	0.340	0.090	0.890
Minimum	-5.359	0.060	0.006	0.030
Std. Dev.	3.826	0.050	0.018	0.157
Skewness	2.888	0.301	1.871	1.861
Kurtosis	13.226	3.006	6.536	7.369
Jarque-Bera	689.646	1.817	132.532	164.676
Probability	0.000	0.403	0.000	0.000
Observations	120	120	120	120

Source: E-View 13 Output

The descriptive statistics for EPS reveal a mean of 2.398, indicating that, on average, shareholders of listed Deposit Money Banks (DMBs) in Nigeria earn about ₦2.40 per share. The median value of 0.990 is significantly lower than the mean, suggesting a right-skewed distribution. This skewness is confirmed by a high skewness value of 2.888 and a kurtosis of 13.226, indicating a distribution with heavy tails and extreme values. The maximum EPS is 21.550, while the minimum is -5.359, showing significant variation in financial performance across banks. The standard deviation of 3.826 also reflects substantial variability. The Jarque-Bera test statistic of 689.646 and a p-value of 0.000 confirm that the EPS data is not normally distributed. These findings highlight that while some banks perform well, others may be experiencing financial distress, justifying further analysis of capital-related factors influencing EPS.

The mean CAR is 0.180, and the median is also 0.180, suggesting a symmetric distribution around the central value. The minimum and maximum values range from 0.060 to 0.340, reflecting moderate variability across banks. The standard deviation is 0.050, indicating relatively low dispersion. A skewness of 0.301 and a kurtosis of 3.006 imply an approximately normal distribution. The Jarque-Bera statistic is 1.817 with a p-value of

0.403, confirming normality of the distribution. This suggests that most banks maintain a relatively stable capital adequacy ratio, aligning closely with regulatory benchmarks, and providing a reasonable basis for examining their influence on financial growth.

PUSC shows a mean of 0.024 and a median of 0.020, indicating a slightly right-skewed distribution. The maximum and minimum values are 0.090 and 0.006, respectively, with a standard deviation of 0.018, showing modest variability across DMBs. The skewness of 1.871 and kurtosis of 6.536 indicate a non-normal distribution with a long right tail and a sharp peak. The Jarque-Bera statistic of 132.532 and a p-value of 0.000 confirm a significant departure from normality. This suggests that while most banks have low paid-up capital relative to total assets, a few outliers may possess substantially higher levels, warranting investigation into its differential effect on earnings.

The average SP is 0.242 with a median of 0.210, indicating a moderate right-skewed distribution. The maximum value of 0.890 and minimum of 0.030 reflect a wide range, while a standard deviation of 0.157 shows substantial variability. A skewness of 1.861 and kurtosis of 7.369 confirm a non-normal, positively skewed distribution with heavy tails. The Jarque-Bera statistic of 164.676 and a p-value of 0.000 reinforce this finding. These results suggest significant disparities in how listed DMBs utilize share premium funds, with implications for their capacity to finance growth and enhance shareholder value through earnings.

Given that the descriptive statistics revealed non-normal distributions for EPS, Paid-Up Share Capital (PUSC), and Share Premium (SP), as evidenced by their high skewness, kurtosis, and significant Jarque-Bera test results, a log transformation was applied to these variables to normalize their distributions and ensure the validity of subsequent regression analyses.

Table 3:

Correlation Analysis

	EPS	CAR	PUSC	SP
EPS	1			
CAR	0.0946	1		
PUSC	0.046	0.03	1	
SP	0.1757	0.03	0.1208	1

Source: E-view 13 Output

Table 3 presents the correlation analysis between Earnings Per Share (EPS) and selected banking indicators: Capital Adequacy Ratio (CAR), Paid-Up Share Capital (PUSC), and Share Premium (SP). Prior to the analysis, a base-10 logarithmic transformation (Log10) was performed on variables that significantly deviated from normality. Since EPS included non-positive values, a constant was added to ensure all values were positive before transformation. As expected, EPS shows a perfect correlation with itself (r = 1.000). The correlation between EPS and CAR is 0.0946, indicating a very weak positive relationship. EPS also has a weak positive correlation with PUSC (r = 0.046) and SP (r = 0.1757). These results suggest that while there is a slight positive linear relationship between EPS and the independent variables, particularly Share Premium, the relationships are generally weak and may not independently drive changes in financial growth (EPS) without further multivariate analysis.

Table 4:

Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.052833	58.90216	NA
CAR	0.362801	14.10681	1.0018
PUSC	0.002327	40.93929	1.0156
SP	0.002504	8.127074	1.0156

Source: E-View 13 Output

Table 4 presents the results of the multicollinearity test using the Variance Inflation Factor (VIF) to assess the degree of correlation among the independent variables: Capital Adequacy Ratio (CAR), Paid-Up Share Capital (PUSC), and Share Premium (SP). The analysis focuses on the Centered VIF values, which are more reliable indicators for detecting multicollinearity. CAR has a centred VIF of 1.0018, PUSC has 1.0156, and SP also has 1.0156. These values are all very close to 1 and well below the commonly accepted threshold of 10, indicating no evidence of multicollinearity among the predictor variables. Therefore, the independent variables can be reliably used together in the regression model without concern for multicollinearity distorting the results.

Table 5 presents the results of the heteroskedasticity test using the Residual Cross-Section Dependence Test. The test statistics for the Breusch-Pagan LM (359.9512), Pesaran scaled LM (25.58517), and Pesaran CD (6.283605) are all statistically significant with p-values of 0.0000. This strongly indicates the presence of cross-sectional dependence and heteroskedasticity in the residuals, thus violating the classical linear regression assumption of constant variance. To address this problem, a White cross-section robust standard error was used to correct for heteroskedasticity and improve the reliability of the model estimates.

Table 5:

Heteroscedasticity Test Results

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	359.9512	66	0.0000
Pesaran scaled LM	25.58517		0.0000
Pesaran CD	6.283605		0.0000

Source: E-view 13 Output.

Table 6:

Redundant Fixed Effects Tests
Equation: EQ01
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.968283	(11,105)	0.0000
Cross-section Chi-square	97.515193	11	0.0000

To determine the appropriate model between the Pooled Ordinary Least Squares (OLS) regression and the Fixed Effects Model (FEM), a Redundant Fixed Effects Test was conducted, as presented in Table 6. The results show that both the Cross-section F-statistic (11.9683, p = 0.0000) and the Cross-section Chi-square statistic (97.5152, p = 0.0000) are highly significant. These results lead to the rejection of the null hypothesis that cross-sectional effects are redundant. Therefore, the Fixed Effects Model is preferred over the Pooled OLS model, as it accounts for unobserved heterogeneity across the cross-sectional units (banks) in the panel data.

Table 7:

Fixed Effect Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.691655	0.156798	10.78873	0.0000
CAR	-0.321081	0.365059	-0.879533	0.3811
LOG(PUSC)	-0.081543	0.037545	-2.171877	0.0321
LOG(SP)	-0.142959	0.051608	-2.770094	0.0066

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.573755	Mean dependent var	2.181870
Adjusted R-squared	0.516923	S.D. dependent var	0.330479
S.E. of regression	0.229696	Akaike info criterion	0.012345
Sum squared resid	5.539805	Schwarz criterion	0.360781
Log likelihood	14.25932	Hannan-Quinn criter.	0.153846
F-statistic	10.09553	Durbin-Watson stat	1.082519
Prob(F-statistic)	0.000000		

Source: E-view 13 Output

Table 7 presents the results of the fixed effects panel regression estimating the impact of Capital Adequacy Ratio (CAR), Paid-Up Share Capital (PUSC), and Share Premium (SP) on the financial growth of listed Deposit Money Banks, measured by the log of Earnings Per Share (LOG(EPS)). The R-squared value of 0.5738 indicates that approximately 57.38% of the variation in EPS is explained by the model, while the adjusted R-squared of 0.5169 accounts for model complexity, still showing a good fit. Among the predictors, CAR has a negative but statistically insignificant effect (β = -0.3211, p = 0.3811) on earnings per share of listed deposit money banks in Nigeria. LOG(PUSC) also shows a negative and statistically significant effect (β = -0.0815, p = 0.0321) on earnings per share of listed deposit money banks in Nigeria, while LOG(SP) has a stronger negative and significant effect on EPS (β = -0.1430, p = 0.0066) on earnings per share of listed deposit money banks in Nigeria. The F-statistic of 10.096 (p = 0.0000) confirms the overall significance of the model. However, the Durbin-Watson statistic of 1.083 suggests the presence of positive autocorrelation, indicating that further diagnostic tests and possible corrections may be needed for robustness.

Discussion of Findings

The negative but statistically insignificant effect of Capital Adequacy Ratio (CAR) on Earnings Per Share (EPS) suggests that although capital adequacy is essential for ensuring financial stability, it does not directly translate into improved profitability for shareholders in the short term. A high CAR indicates that a bank holds a larger buffer of capital relative to its risk-weighted assets, which may limit the amount of funds available for lending and other income-generating activities. This conservative posture, though beneficial for long-term solvency and regulatory compliance, may reduce earnings potential in the immediate term. Additionally, the insignificance of the result could imply that other internal or external factors have a more dominant influence on EPS than CAR in the Nigerian banking context. The finding that the Capital Adequacy Ratio (CAR) has a negative but statistically insignificant effect on EPS aligns with Awwad (2021), Pervez et al. (2023), Musa et al (2014) and Ezu et al. (2023), who reported negative impacts of high CAR on profitability. However, it disagrees with Akinbola (2024), Musa et al (2013) and Wike et al. (2024), who found positive effects, suggesting that outcomes may depend on capital composition and regulatory alignment.

The negative and statistically significant relationship between Paid-Up Share Capital (PUSC) and EPS indicates that increasing paid-up share capital does not necessarily lead to higher earnings for shareholders of listed Deposit Money Banks in Nigeria. This could be due to dilution of earnings when new shares are issued, thereby spreading profits over a larger number of shares. Additionally, if the increased capital is not efficiently deployed into profitable ventures or lending activities, the anticipated financial benefits may not materialize. The result may also reflect inefficiencies in capital utilization, weak investment strategies, or high operating costs that undermine the productivity of additional capital. Thus, higher PUSC may lead to reduced returns per share, as reflected in lower EPS. The negative and significant effect of Paid-Up Share Capital (PUSC) on EPS contradicts the findings of Shikumo (2021), Ifurueze et al (2016), Samuel et al. (2022), and Usman et al. (2021), who reported positive associations between share capital and financial performance. However, it aligns with Onyebuchi (2024), who also observed a negative and significant effect, implying that excessive equity without efficiency may depress returns.

The finding that Share Premium (SP) has a stronger negative and statistically significant effect on EPS suggests that the excess capital raised over the nominal value of shares may not be efficiently utilized to generate immediate earnings. In many Nigerian banks, funds from share premium accounts are often reserved for future strategic expansion, mergers, or compliance with regulatory capital requirements rather than income-generating activities. Moreover, the accumulation of SP could signal past equity financing rather than earnings growth, which might dilute current shareholders' value if returns on investment are slow or uncertain. The stronger negative effect implies that the way SP is deployed matters significantly for shareholder value, and inefficient use of such capital may lead to reduced EPS. The result showing a stronger negative and significant effect of Share Premium (SP) on EPS contradicts John et al. (2022), who found a strong positive effect, Musa et al (2015) and Onyebuchi (2024), who found a positive but insignificant result. This suggests that while SP can offer financial flexibility, its inefficiency or misallocation may lead to diminished shareholder value.

Conclusion and Recommendations

The findings of this study provide important insights into the relationship between capital structure components and the financial growth of listed Deposit Money Banks (DMBs) in Nigeria, as measured by earnings per share (EPS). The negative but statistically insignificant effect of Capital Adequacy Ratio (CAR) on EPS indicates that while capital adequacy is crucial for financial stability, it may not directly influence shareholder earnings in the short term. The significant negative impact of Paid-Up Share Capital (PUSC) suggests that increasing equity without commensurate returns could lead to dilution of profits, thereby lowering EPS. More critically, the stronger negative and significant effect of Share Premium (SP) underscores the need for efficient utilization of excess capital raised through equity financing to enhance profitability. Overall, the study concludes that although capital strength is essential, its components must be strategically managed to drive financial growth, highlighting the importance of optimal capital allocation and utilization in Nigerian DMBs. Based on this, the following recommendations are proposed.

i. Regulators should adopt a dynamic risk-based approach to capital adequacy requirements, ensuring banks maintain optimal capital levels without overburdening profitability. In the Nigerian context, this would involve revising capital buffers to reflect macroeconomic conditions and operational realities of DMBs, thereby enhancing financial stability while preserving banks' ability to generate earnings for shareholders.
ii. Banks should match capital increases with productive investments that generate returns to avoid profit dilution. In Nigeria, this can be achieved by linking capital expansion to lending targets in sectors like agriculture and manufacturing, which offer higher returns and developmental impact, ensuring that shareholders benefit through increased earnings per share.
iii. DMBs should channel share premium reserves into revenue-generating activities such as fintech partnerships and digital banking innovations. In the Nigerian context, this strategy can boost operational efficiency, attract a younger customer base, and enhance earnings, ensuring that excess equity capital contributes meaningfully to shareholder value and sustainable financial growth.

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